

Subject: INFORMATION: Policy Regarding Material Strength
Properties and Design Values, § 25.613.

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From: Manager, Transport Airplane Directorate, Aircraft
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To: Managers, ACE-100, ASW-100, ANE-100, AIR-100

The Transport Directorate has combined the requirements in § 25.615, "Design properties" with § 25.613, "Material strength properties and design values". The probability bases contained in MIL-HDBK-5 for established allowables was incorporated in a new § 25.613(b)(1) subparagraph and the MIL-HDBK references were deleted. This regulatory change to Part 25 was made effective by Amendment 25-72 (55 FR 29776 July 20, 1990).

It has come to our attention that deleting the reference to the MIL Handbooks could cause inconsistency in the methods used in developing the design allowable. There was no intention during the amendment to § 25.613 and § 25.615 to deviate from the methods defined in MIL-HDBK-5 and MIL-HDBK-17. Since the methods acceptable to the FAA were the MIL handbook methods, it was thought that all manufacturers developing their own allowable would continue to use these methods.

The design allowables established for metal structures should continue to be developed using the methodology in MIL-HDBK-5, "Metallic Materials and Elements for Flight Vehicle Structure". The allowables for composite structures should continue to be based on the procedures defined in MIL-HDBK-17, "Polymer Matrix Composites".

Since basic airframe structure will on occasion require repairs, the allowables for materials used in primary aircraft structures must be made available to airplane manufacturers, owners and operators. The operators are required to have FAA approved maintenance programs. These programs are based on long established maintenance practices which allow the operators to make, and in some instances approve, repairs to their airplanes. The owner of an airplane must be able to make repairs to his airplane without total reliance on the material suppliers. So as a practical matter, design allowables for aircraft materials should not be considered proprietary information.